

Serial No. 10/577,769
Docket No. 04USFP1024-K.M.

7

REMARKS

Claims 1-11 and 23 are all the claims presently pending in the application. Although the Applicant disagrees with the Examiner's characterization of statutory subject matter, claims 1-5 and 7-11 have been amended in an attempt to address the Examiner's specific interpretations. Claims 12-22 are canceled.

Entry of this Amendment is believed proper since no new issues are being presented to the Examiner which would require further consideration and/or search.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-6 and 7-11 stand rejected under 35 U.S.C. § 101 as being allegedly directed to non-statutory subject matter.

Claim 23 stands rejected under 35 U.S.C. § 102 (e) as being anticipated by Schwartz et al., (U.S. Patent No. 6,101,276).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention, as exemplified by claim 1, is directed to an image decoding apparatus that divides a coded image data into a plurality of code blocks of a plurality of layers based on a control parameter, and carries out a first image decoding process, a second image decoding process, and a third image decoding process to each of the plurality of code blocks, including an analyzing processor which is adapted to calculate a first process quantity

Serial No. 10/577,769
Docket No. 04USFP1024-K.M.

8

for the second image decoding process and the third image decoding process within a process time that is taken for a decoding process to the coded image data, and calculate a second process quantity for the first image decoding process based on the first process quantity. The first image decoding process includes an arithmetic decoding process and a bit modeling decoding process, the second image decoding process includes an inverse quantization process, and the third image decoding process includes an inverse wavelet conversion process. The image decoding apparatus also includes an image decoding processor adapted to obtain a decoded image by executing the second image decoding process and the third image decoding process to the coded image data after the first image decoding process based on the second process quantity.

In conventional image decoding apparatuses, it is difficult to control the process time optimization of the whole system, and to suppress the degradation of image quality. (See Application at page 5, lines 6-16).

The claimed invention, on the other hand, may possible to carry out the control of process time optimization of the whole system so that the degradation of image quality can be suppressed.

II. THE 35 USC §101 REJECTION

Claims 1-6 and 7-11 stands rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter.

With regard to rejection of claims 1-11, Applicant disagrees with the Examiner's allegation that the specification indicates that the invention "may be embodied as pure software." (Office Action, page 3, lines 3-4). Rather, page 19, line 18 merely describes that a function block can be realized by only the hardware, only the software, or those combinations,

Serial No. 10/577,769
Docket No. 04USFP1024-K.M.

9

without limiting the claimed invention as a whole as "pure software."

Applicant also point out that the claimed invention cannot be interpreted by one of ordinary skill in the art as claiming "a signal." Indeed, a mere signal would not have all the capabilities recited by the claimed invention.

To further expedite prosecution, however, the claims have been amended in such a way believed to address this Examiner's interpretation of statutory subject matter.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

III. THE PRIOR ART REFERENCE

The Examiner alleges that Schwartz teaches the claimed invention recited by claim 23. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by Schwartz.

Claim 23 recites, inter-alia, "determining a process quantity of a coded image data in said plurality of image decoding processes within a unit process time based on a parameter for said coded image data."

Applicant points out that MPEP 2111 requires that "reasonably broad" interpretations have to be acceptable to one having ordinary skill in the art.

Here, the Examiner erred by confusing Schwartz's probability state and context as the claimed "process quantity" and "parameter" of the claimed invention, respectively. (Office Action, page 6, paragraph 7, lines 10-12). However, Schwartz teaches completely different concepts than that of the claimed features.

First, Applicant points out that one of ordinary skill in the art would not agree with the Examiner's equivalence of the terms, because "quantity" is not "probability." That is,

Serial No. 10/577,769

10

Docket No. 04USFP1024-K.M.

Schwartz merely teaches that a context model 1430 provides a context to a memory 1431 where a probability state is determined. The probability state is converted with logic 1432 to a "Qe_value" for the arithmetic coder 1433, which updates an internal A& C register and determines a decision (MPS or LPS). (Column 21, lines 43-47). In more detail, Schwartz also teaches that context 1402 is used to look up probability state 1404 in memory 1403, which is then converted by logic 1405 to a probability class (Qe_Value) 1406. Qe_value 1406 represents the current estimate of a less probable symbol (LPS). Qe_Value 1406 is compared with A and C register values as set forth in Figure C-15 of the JPEG Standard of the MQ-coder's internal state by logic 1407 to generate the output decision 1408, which may be a more probable symbol (MPS) or LPS.

In contrast, the "process quantity" of the claimed invention may refer to a data quantity or process time of a process. (See, for example, Page 16, lines 20-21 of the specification). Schwartz's probability state has nothing to do with data quantity or process time of a process, and the Examiner has not explained how one of ordinary skill in the art may have understood Schwartz's probability state as the claimed "process quantity", or as either data quantity, or process time of a process, of a coded image data. Therefore, the Examiner has not satisfy his burden to prove that Schwartz's teaching of a probability state teaches or suggests, "process quantity" of the claimed invention.

Similarly, the Examiner has not explained how Schwartz's teaching of providing a context 1402 by context model 1410 teaches or suggests, "a parameter for said coded image data." Indeed, Schwartz fails to teach or suggest how the context is even related to the coded image data. In contrast to Schwartz's teaching that Context 1402 is used to look up probability state 1404 in memory 1403, (Column 21, lines 64-66), the claimed "parameter" may refer to, for example, a unit process time of one image, the number of code blocks, a code

Serial No. 10/577,769
Docket No. 04USFP1024-K.M.

11

block size, the number of bit planes, the number of quantization steps, or a weighting coefficient of a code block. (See Application at page 20, lines 10-20) which are unrelated to a context that is determined by a context model 1410.

Therefore, one of ordinary skill in the art would not even recognize that Schwartz's context 1402 may somehow be interpreted as the "parameter" of the claimed invention, contrary to the Examiner's allegations.

Since there are elements of the claimed invention that are not taught or suggested by Schwartz, the Examiner is respectfully requested to reconsider and withdraw this rejection.

The Applicant also points out that the Examiner has not applied any references to reject claims 1-11. Therefore the Applicant asserts that these claims are allowable.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-11 and 23, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

Serial No. 10/577,769
Docket No. 04USFP1024-K.M.

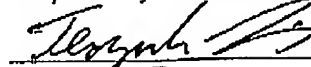
12

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Date:

9/15/09

Respectfully Submitted,



Jeoyuh Lin, Esq.

Registration No. 56,032

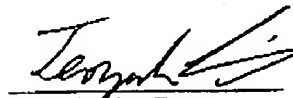
Sean M. McGinn, Esq.

Registration No. 34,386

McGinn IP Law Group, PLLC
Intellectual Property Law
8321 Old Courthouse Road, Suite 200
Vienna, VA 22182-3817
(703) 761-4100
Customer No. 21254

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Amendment Under 37 CFR §1.116 by facsimile with the United States Patent and Trademark Office to Examiner Jose L. Couso, Group Art Unit 2624 at fax number (571) 273-8300 this 15th day of September, 2009.



Jeoyuh Lin, Esq.

Registration No. 56,032